

CATS Newsletter

The Capital Area
Timex/Sinclair Users
Group

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Playing With PCL...

by
Mark Fisher

PCL is such a fun language. I speak ironically, of course, but there is an undeniable thrill to getting fancy formats out of a program that was developed ten years before the printer it utilizes.

As CATS members that have been to recent meetings know, I've joined the laser generation. My trusty C. Itoh 9 pin printer, still mechanically just as sound as the day ten years ago when I bought it to take print outs from my 2068, let some of that magic smoke out, and turned belly up.

This happened just as three deadlines were fast approaching - two newsletters and a trip to Vancouver. Fortunately, a Christmas check also appeared in the same week, and it didn't take much encouragement to get me to take the plunge.

The laser printer I decided on was the HP4_l, the *lite* version of the HP4 series of printers. It is physically light, as well as electrically light - 5 watts on standby! At first glance, one might think it was functionally light as well, without the mass of front panel buttons, but this lack is remedied with a "Bi-tronics" parallel port. The Bi-tronics bit allows a conforming IBM computer to take the place of the missing printer buttons. A willingness to use direct PCL commands makes up for the rest.

I'm very happy with it. The bulk of my editorial work is done in GEOS or WordPerfect, and I tested the HPIII drivers in GEOS before I bought the printer - they worked perfectly, porting the GEOS soft fonts without complaint. Heavily formatted pages can take ~4 minutes from GEOS, as each font is downloaded to the printer before

the page is issued - some printer files can amount to 200K for a one page file! WordPerfect is much faster, benefiting from its use of the 24 native printer fonts in the HP4_L, as well as more recently tailored drivers.

Once I got the kid home, I tried it out on the other machines in the stack. The Tandy 102 worked fine, and, after the January CATS meeting, the QL did as well! The catch for both of these machines, however, was the complete lack of driver software.

That's where I started to get to know my ~100 page printer manual. While the HP4_l is a full graphic printer with that Bi-tronics interface, it also will swallow plain ASCII without complaint, returning an impressive quality of output in that mode as well. It wasn't a very big leap to start incorporating PCL commands into the QL's printer driver page.

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A Word from the Editor:

April will be Paste-up Month. Bring the articles you'd like to see in the newsletter and help put them in!

The BBS is Moving!

As of Feb. 15, a check was sent in to SAILOR to establish an E-Mail account that will be accessible via a local call to all Maryland CATS'ers, and, of course, able to receive messages from anywhere on the planet via Internet.

The word is that the account should be active in 30 days from that date. More details will be available at the March meeting.

Sailor — Caught in Traffic!

by Duane H. Parker

The Maryland Public Library Internet access opportunity is "caught in traffic." Apparently, enough people have learned to use this service that online access has begun to clog up.

This week I tried to reach the SAILOR Gopher (if you don't know what this is see my article in the Nov-Dec CATS N/L) and reach some other gophers on the Internet. Normally I have been able to get from here to the university of Cologne Germany in a matter of of seconds and use the Veronica there.

This Saturday morning, I reached the library computer easily, but each choice on the menu took so long that my patience ran out. I would rapidly get to the place where the library software asks for the terminal type - I entered the type, VT102, and I had to wait about two minutes.

After the remarks, I finally go choose "Gopherspace" - another minute or two. Then I tried to reach one of the Veronica's. Each trial on these menu items resulted in a "connection Refused" message. In short, I was unable to reach any service on the Internet I wanted.

Has anyone else had this problem? Let us know, call our BBS, or our soon to be established E-mail address.

Through CompuServe I can now access the Usenet nodes and read or post messages, including the Sinclair usenet. They now also have FTP services, but I have not tried these yet.

I did expect the library Internet to clog up, but not this soon!

[Ed. note:] I've been on SAILOR a few times recently, and access always seemed fairly easy (though I didn't try Saturday morning, as Duane did).

From Page 1...

To learn PCL, I took printer dumps from WordPerfect and cross referenced them to the manual's list of commands. It turned out that the syntax was fairly straight forward.

Probably the most complex formatting I've done is the accompanying "CHECKS.PRG" **Archive** application. In it, I change fonts, rotate text twice, and play between **Archive's** rather rudimentary formatting and the still unknown pitfalls of PCL.

The big difference between the decade-old dot matrix technology and the HP is that the HP deals with a page at a time. Sequential commands that rotate text, store positions, and advance to fixed points are related to the future final page, held it the printer's 1MB (doubled, with compression) of memory.

The basic PCL syntax is fairly simple. There are about ten basic families of $\text{\textbackslash}^E_c$ (escape, chr\$(27)) sequences, with dozens of modifiers following. E.G. " $\text{\textbackslash}^E_c(s)$ " is the prefix for the text quality modifiers - upright, italic, condensed, outline, shadowed, etc. Now, not all these are available in any combination - some qualities adhere to certain fonts - a common example is the combination of fixed pitch and the Courier font.

The program:

This program evolved from my impatience with copying out an account number and "For Deposit Only" on every check to deposit. I came up with a BASIC version on the Tandy 102 laptop, and adapted it to the HP4L printer. I hadn't gotten all the bugs out of it, however, and finally decided to have a go at porting it over to **Archive**. I was able to use the PCL commands pretty much as in the Tandy program, though the program structure is quite different. I also tried writing a version using WordPerfect's tables feature, but I haven't mastered the implications of that yet, as well as the problems of rotating text all over the page.

Program flow is fairly straightforward; **start** sets up the printer in **ptr_setup** then gets

account and name info, then switches to **main** to control the overall flow. Check information is picked up in **ck_log**, then verified, with the option of starting over. Output to the printer is in **slip**, then checks are **endorsed**. **Q** cleans up the .DBF file that was used to hold the data.

PCL commands:

- E_cE** Clears all printer setup material from previous jobs.
- E_c&l2H** Manual feed paper.
- E_c(s0P** Fixed pitch - dealing with the pretty proportional fonts would be impossible without tables of character widths.
- E_c&s0C** Wrap lines - the default ignores text beyond the edge of the paper.
- E_c&a16R** Move to row 16. **Archive's** TAB wouldn't work as the setup commands must occur in the first line, and **Archive** doesn't know they won't print.
- E_c&f0S** Push (store) cursor position.
- E_c&a7r8c270P** This is a compound command. Commands that have a common prefix can be strung together. The last command of a string is finished with a capital letter. In this case, the **7r** moves to row 7, **8c** moves to 8th column, and **270P** rotates text 270°.
- E_c&f1s0S** Pop (recall) position (1s), then store it again (0S).
- E_c&a0p7R** This line cannot be strung with the line previous, as the prefix is different. **0p** returns to "portrait mode," and **7R** moves to row 7.
- E_c&f1S** Pop position: The **total** will always be in the same position, no matter how many checks are listed. This is an easy way of "indexing" the cursor's position.
- E_c&a32r20C** Row & column for total.
- E_c&a38r21c270P** Row & column for check count.

CHEVY CHASE BANK, FSB REV. 11/94 P-15
ATM DEPOSIT TICKET

Circle American (888428) 02/19/1995

DATE 02/19/1995

NAME Mark T. Fisher

ACCT. NO. XXX-XXXXXX-X

	DOLLARS	CENTS
CURRENCY		
COMM		
CHECKS		
1 23-235	150	00
2 3-15	12	05
3 2-65	220	00
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
TOTAL	0	00

CUSTOMER SIGNATURE

CHEVY CHASE BANK, FSB

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ATM DEPOSIT TICKET

Sinclair Rides Internet

by John Pazmino, LIST

Since joining INTERNET, I came across several sources for Sinclair news and help. These are in the forums circulated via INTERNET various sites tied to INTERNET. For the most part the material relates the Spectrum and is dominated by British users. Apparently, there are few or no Sinclair clubs left in England; all the users seem to be solitary hobbyists,

The room for Sinclair discussions is COMP.SYS.SINCLAIR. This is in the division for computer platforms, along with Amiga, NeXt, Sun, and the others. It functions like an ordinary BBS room, except that you enter thru your INTERNET link. Please note that your INTERNET carrier may offer only certain of the forums and you may have to request a feed from COMP.SYS.SINCLAIR.

The sites are computer systems that allow the caller to enter directly and fetch material from them. These are accessed via FTP, GOPHER, or WWW. These are features which must already be offered by your INTERNET carriers if you have only a low level link they may be unavailable. Several of these are:

HTTP://FTP.NVG.UNIT.NO/PUB/SINCLAIR/DOCS
HTTP://WWW.NVG.UNIT.NO/SINCLAIR/SPECTRUM
HTTP://WWW.CS.UMD.EDU/USERS/FMS

FTP://FTP.NVG.UNIT.NO/PUB/SPECTRUM
FTP://WUARCHIVE.WUSTL.EDU/SYSTEMS/SINCLAIR
FTP://OAK.OAKLAND.EDU/PUB/MSDOS/EMULATORS
FTP://FTP.SUN.AC.ZA/PUB/MSDOS/ZX
FTP://FTP.IJS.SI/PUB/ZX

GOPHER://GOPHER.NVG.UNIT.NO

The addresses extend to the lowest directory on the system. From there You must do a catalog listing to see what actual files are loaded. These are updated or changed continually.

Software at these sites is casually distributed. The original publishers long ago went out of business, leaving their products for the Sinclair community.

One peculiarity of this news and help on INTERNET is that for the most part it is out of reach from a regular Spectrum machine! Except for on-line message posting and downloading the smallest text files the spectrum is simply too modest a computer for heavy INTERNET work. So how do Sinclairs hang out on INTERNET?

Well, by now there are few native Sinclair machines left. Most have been discarded in favor of IBMs. Correspondents use the IBMs for the telecoms thru INTERNET. Then they run Spectrum emulators on the PCs to use the stuff they downloaded.

HELP	COMMANDS	create	look	open	close	COMMANDS
press F1	delete	display	back	alter	find	press F3
PROMPTS	first	insert	last	next	quit	ESCAPE
press F2	type command & press ← (F3 for more)				press ESC	
----- ENTER CHECK HERE -----						
Pay to the Order of: Mark T. Fisher				Bank Number 34-678		
Acct Number: XXX-XXXXXX-X				Amount (\$) 120.00		
----- PRESS F - 4 WHEN DONE -----						


```
>lprint e$+"(10V"  
>lprint e$+"(s16H"  
>lprint e$+"&l8D"  
>
```

Archive "CHECKS.PRG"
MTF 1995

```

proc start
  ptr_setup: rem PCL is such a fun language----->
  cls
  print : print
  print tab 15;"CHECK DEPOSIT PRINTE
  R"
  print
  print tab 18;"Setup to print to HP 4L Printer"
  print : print tab 16;"Press '1' for Mark or '2' for Sarah"
  let a$=upper(getkey())
  if a$="1"
    let name$="Mark T. Fisher": let acct$="xxx-
    xxxxx-xx"
    endif
  if a$="2"
    let name$="Sarah B. Fisher": let acct$="yyy-
    yyyyy-y"
    endif
  main -----
endproc

proc main
  print "Deposit slip must be inserted in manual feed
  slot of HP4L printer"
  print "Checks less than 7 inches long will not feed
  through."
  print "Type 'slip' to repeat printing of deposit slip"
  print "Press any key to continue"
  let a$=getkey(): let a$="N"
  while a$="N"
    log_cks -----
    first : cls
    print : print
    print "DEPOSIT SLIP AMOUNTS FOR ";name$;"
    on ;date(2): print
    while not eof()
      print bank$; tab 12;dec(val(ck_amt$),2,8)
      let ttl=ttl+val(ck_amt$)
      next
    endwhile
    print : print "OK? [Y/n]"
    let a$=upper(getkey())
  endwhile
  slip -----
  first
  while not eof()
    endorse -----
    next
  endwhile
  print "Type 'Q' to quit."
endproc

proc e: rem This is just for convenience: one letter and
  I'm in EDIT
  edit
endproc

proc ptr_setup
  let e$=chr(0)+chr(27): rem there are a lot of ESC
  char's needed to get the HP4L to do its tricks. The
  leading ASCII 0 is needed by ARCHIVE.
  let ff$=chr(0)+chr(12)
  lprint e$+"E";rem reset printer
  lprint e$+"&l2H";rem manual feed paper
  lprint e$+"(s0P";rem fixed pitch.
endproc

proc log_cks : rem check data is loaded in here...
  error q : rem "Chec.dbf" is created new for each
  deposit slip, then erased upon quitting.
  let ttl=0
  create "chec"
  bank$
  ck_amt$
  endcreate
  sload "check": rem see illustration...
  screen
  insert :rem here's where the checks are entered.
endproc

proc slip: rem The routine that prints the deposit slip...
  lprint E$+"&a16R";date(2)
  rem position @ date area and print it...
  rem
  lprint e$+"&f10S"+e$+"&a7r8c270P";name$: lprint :
  lprint tab 14;acct$
  rem rotate text, move to name area & print it
  rem
  lprint e$+"&f1s0S"+e$+"&a0p7R"
  rem pop position (&store it again immediately); then
  level print again
  first
  while not eof()
    lprint tab 13;bank$; tab 20;dec(val(ck_amt$),2,9)
    next
  endwhile
  lprint e$+"&f1S"+e$+"&a32r20C";dec(ttl,2,8);
  rem pop position & move to totals area, no matter
  how far down the slip I've come.
  lprint e$+"&a38r21c270P";count()
  rem move to second totals area and rotate text again.
  lprint e$+"=": lprint : lprint : lprint
  lprint tab 60;dec(ttl,2,8)
  lprint e$+"&a0P"+ff$: rem kick it out with a form feed.
endproc

proc endorse
  lprint e$+"(s1p4148t3B";name$
  rem switch to a pretty font for the endorsement
  lprint acct$
  lprint "For Deposit Only";ff$
endproc

proc q
  close
  kill "chec.dbf"
endproc

```


THE CAPITAL AREA TIMEX/SINCLAIR USERS GROUP is a not-for-profit group serving the interests of those who own, use, or are interested in the Timex/Sinclair family of computers.

Officers:

Chairman	Monthly position
Vice-Chairman	Monthly position
Recording Secretary	Monthly position
Corresponding Secretary	Joe Miller
Treasurer	Barry Washington
Newsletter Editor	Mark Fisher
	(301) 589-7407
	(301) 588-0579 BBS

Meetings

Monthly meetings are held from 12:00 M to 4:30 PM on the second Saturday of each month at the New Carrollton Library.

Newsletter

User Group memberships cost \$10.00 per year, are good for 12 months and include all privileges (access to software libraries, group buys, etc.).

Mail dues to:

LeBaron (Barry) Washington
7044 Cindy Lane
Annandale VA 22003

Networks

internet: send article submissions (short or long) to "sfisher@capcon.net".

Timex SIG on Compuserve: Wednesday night 10:00 PM Eastern Standard Time (GO CLUB)

CATS BBS: (301) 588-0579, 8-N-1. 300/1200/2400 baud. Message base and files for members, 24 hours a day, no time limits.

CATS Newsletter
7044 Cindy Lane
Annandale VA 22003

FIRST CLASS MAIL



The next two meetings of CATS will be held on: March 11, 1995
and ... April 8, 1994 **(Paste up for May-Jun)**

12:00 M Hardware workshop
2:00 PM General meeting

At: New Carrollton Public Library

If you are not a member of CATS, this is the only issue you will receive.